



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Detroit Airports District Office  
Metro Airport Center  
11677 South Wayne Road, Ste. 107  
Romulus, MI 48174

July 18, 2016

Mr. David Reid, CM CTA, Airport Director  
Kalamazoo/Battle Creek International Airport  
5235 Portage Road  
Kalamazoo, MI 49002

Kalamazoo/Battle Creek International Airport, Kalamazoo, Michigan  
Modification of Airport Construction Standards

Dear Mr. Reid:

Enclosed are copies of partially and conditionally approved Modification to Standards (MTS) for the apron construction project at AZO. These MTS request are for the pre-qualification of bidders, construction layout staking, and aggregate base courses, specified under P-208 and P-209 of AC 150/5370-10G. Please note the comments we have provided in the conditional approvals, outlined on Page 3 of each of the documents.

Sincerely,

**ORIGINAL SIGNED BY**

Marlon D. Peña  
Program Manager

cc: MDOT Aeronautics

**FAA GREAT LAKES REGION**  
**MODIFICATION OF AIRPORT DESIGN STANDARDS**  
**COMPLETE FORM IN CONJUNCTION WITH THE USER GUIDE**

<b>BACKGROUND</b>		
1. AIRPORT: Kalamazoo/Battle Creek International Airport	2. LOCATION (CITY,STATE): Kalamazoo, MI	3. LOC ID: AZO
4. EFFECTED RUNWAY/TAXIWAY: General Aviation and Commercial Aprons	5. APPROACH (EACH RUNWAY): N/A <input type="checkbox"/> PIR <input type="checkbox"/> NPI <input type="checkbox"/> VISUAL	6. AIRPORT REF. CODE (ARC): C-III
7. DESIGN AIRCRAFT (EACH RUNWAY/TAXIWAY): General aviation apron is B-II and commercial apron is C-III.		
<b>MODIFICATION OF STANDARDS</b>		
8. TITLE OF STANDARD(S) BEING MODIFIED (CITE REFERENCE DOCUMENT): AC 150/5370-10G Standards for Specifying Construction of Airport		
9. STANDARD/REQUIREMENT: 20-02 Qualification of bidders		
10. DESCRIPTION OF PROPOSED MODIFICATION: Replace 20-02 requirements in their entirety will be replaced with the MDOT prequalification system and Kalamazoo County responsible bidder system. This revision will make that the only option for bidding.		
11. EXPLAIN WHY STANDARD(S) CANNOT BE MET: MDOT prequalification and Kalamazoo County responsible bidder system are equivalent to section 20-02. The systems takes into account both fiscal and qualification requirements.		
12. DISCUSS ALL VIABLE ALTERNATIVES: Only MDOT prequalification system. Unaltered FAA section 20-02.		
13. ASSURANCE THAT MTS WILL PROVIDE AS OUTLINED IN THE 'USER GUIDE':		
<b>ATTACH ADDITIONAL SHEETS AS NECESSARY – INCLUDE SKETCH/PLAN</b>		

# FAA GREAT LAKES REGION MODIFICATION OF AIRPORT DESIGN STANDARDS

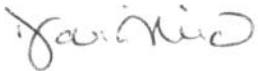
14. Skip to Question 15 if request is not for a Modification To Material Standards or Construction Methods.

## CHECK WHEN APPLICABLE

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | Modifications to materials standards is requested because locally available materials cannot meet the requirements of that standard. |
| <input checked="" type="checkbox"/> | Modifications to construction methods standards will result in cost savings and/or greater efficiency.                               |
| <input type="checkbox"/>            | Bids have already been received for this project.  |

IF ANY OF THE ABOVE IS CHECKED PLEASE PROVIDE ADDITIONAL DETAILS.

This modification will allow the airport and county to continue with the qualification system that is currently in place for the state and county. It will allow the sponsor to have qualified bidders in numerous construction categories vetted for qualification and financial requirements.

15. SIGNATURE OF ORIGINATOR:  	16. PRINTED NAME OF ORIGINATOR  David Reid	17. DATE  2/29/16
18. ORIGINATOR'S ORGANIZATION:  Kalamazoo/Battle Creek International Airport	19. TELEPHONE  (269) 388-3690	20. E-MAIL  dereid@kalcounty.com
21. DATE OF LATEST FAA SIGNED ALP:  August 28, 2013		

**BELOW IS TO BE COMPLETED BY FAA**

22. ADO RECOMMENDATION:

**CONDITIONAL APPROVAL**

23. SIGNATURE:

*Mark D. Res*

24. DATE:

*7/18/16*

25. FAA DIVISIONAL REVIEW (AT, AF, FS, etc.):

ROUTING SYMBOL

SIGNATURE

DATE

CONCUR

NON-CONCUR

COMMENTS:

26. AIRPORTS' DIVISION FINAL ACTION:



**UNCONDITIONAL APPROVAL**



**CONDITIONAL APPROVAL**



DATE:

*7-18-2016*

SIGNATURE:

*[Signature]*

TITLE:

*MANAGER, DET ADO*

CONDITIONS OF APPROVAL:

Conditional Approval based on the FAA's forthcoming approval of this section of the State of Michigan's on-going request for the development of State Standards at public use airports. Airport Sponsor must ensure a firm (including out of state contractors) that is not on the Michigan pre-qualified list has adequate opportunity to become qualified prior to bid opening, which ensures fair and open competition.

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7. DESIGN AIRCRAFT (EACH RUNWAY/TAXIWAY): General aviation apron is B-II and commercial apron is C-III.		
<b>MODIFICATION OF STANDARDS</b>		
8. TITLE OF STANDARD(S) BEING MODIFIED (CITE REFERENCE DOCUMENT): AC 150/5370-10G Standards for specifying construction of airports		
9. STANDARD/REQUIREMENT: 50-06 Construction layout and staking		
10. DESCRIPTION OF PROPOSED MODIFICATION: Replace Contractor Staking with Engineer Staking. The Engineer will retain the layout of horizontal and vertical control as currently required. The Contractor will remain responsible for replacing damaged stakes.		
11. EXPLAIN WHY STANDARD(S) CANNOT BE MET: The engineer will be responsible for all staking requirements on the project. The contractual requirements for engineer staking in Michigan is as follows:  The Consultant is responsible for the construction surveying required to accomplish the contract work. This includes laying out the job, setting benchmarks and grade stakes, taking cross section elevations, and laying out the location and elevation of runway and taxiway lighting and navigational aids. The field method of staking is to be determined by the Consultant, as long as adequate project control is provided to allow the contractor to comply with project plans and specifications.  If applicable, permanent runway centerline monuments and approach surface markers shall be placed by the contractor, at the runway alignment control points, and approach surface locations set by the Consultant. Requirements for the locations and installation of these markers must be shown in the construction plans.		
12. DISCUSS ALL VIABLE ALTERNATIVES: There are only two viable alternatives for this section, contractor or engineer staking for construction layout.		

13 ASSURANCE THAT MTS WILL PROVIDE AS OUTLINED IN THE 'USER GUIDE':

The MTS will not affect the quality of the project, but rather only the party that is completing the construction layout and staking.

**ATTACH ADDITIONAL SHEETS AS NECESSARY – INCLUDE SKETCH/PLAN**

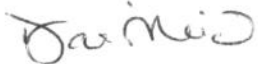
## FAA GREAT LAKES REGION MODIFICATION OF AIRPORT DESIGN STANDARDS

14. Skip to Question 15 if request is not for a Modification To Material Standards or Construction Methods.

### CHECK WHEN APPLICABLE

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | Modifications to materials standards is requested because locally available materials cannot meet the requirements of that standard. |
| <input checked="" type="checkbox"/> | Modifications to construction methods standards will result in cost savings and/or greater efficiency.                               |
| <input type="checkbox"/>            | Bids have already been received for this project.  |

IF ANY OF THE ABOVE IS CHECKED PLEASE PROVIDE ADDITIONAL DETAILS.

15. SIGNATURE OF ORIGINATOR:  	16. PRINTED NAME OF ORIGINATOR  David Reid	17. DATE  2/29/16
18. ORIGINATOR'S ORGANIZATION:  Kalamazoo/Battle Creek International Airport	19. TELEPHONE  (269) 388-3690	20. E-MAIL  dereid@kalcounty.com
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**BELOW IS TO BE COMPLETED BY FAA**

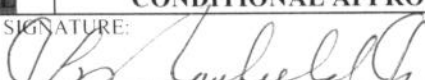
22. ADO RECOMMENDATION:  <div style="font-size: 1.2em; font-weight: bold;">CONDITIONAL APPROVAL</div>	23. SIGNATURE: 	24. DATE: <div style="font-size: 1.2em;">7/18/16</div>
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25. FAA DIVISIONAL REVIEW (AT, AF, FS, etc.):

ROUTING SYMBOL	SIGNATURE	DATE	CONCUR	NON-CONCUR

COMMENTS:

26. AIRPORTS' DIVISION FINAL ACTION:

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
UNCONDITIONAL APPROVAL	CONDITIONAL APPROVAL	
DATE: <div style="font-size: 1.2em;">7-18-2016</div>	SIGNATURE: 	TITLE: <div style="font-size: 1.2em;">MANAGER, DET ADO</div>

CONDITIONS OF APPROVAL:  
  
 Conditional Approval granted based on the following:  
  

1. Sponsor allowing the Contractor to review the Engineer's staking to ensure that they will be able to successfully complete the project.
  
2. The FAA's forthcoming approval of this section of the State of Michigan's on-going request for the development of State Standards at public use airports. The Airport Sponsor must understand this request puts the liability for construction staking on the Owner and their Engineer. In addition, AIP does not participate in costs associated with corrective actions due to survey. This is now the liability the Airport Sponsor is now assuming from the contractor.



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7. DESIGN AIRCRAFT (EACH RUNWAY/TAXIWAY): General aviation apron is B-II and commercial apron is C-III.		
<b>MODIFICATION OF STANDARDS</b>		
8. TITLE OF STANDARD(S) BEING MODIFIED (CITE REFERENCE DOCUMENT): 150/5320-6E Airport Pavement Design and Evaluation		
9. STANDARD/REQUIREMENT: 310. Base Course.		
10. DESCRIPTION OF PROPOSED MODIFICATION: Replace standard FAA base courses with a recycled bituminous aggregate base course. The base course material will be composed of pulverized bituminous pavement and existing base course material.		
11. EXPLAIN WHY STANDARD(S) CANNOT BE MET: The existing base course is of unknown quality and not of sufficient quantity to be a reliable base course and needs to be supplemented or replaced.		
12. DISCUSS ALL VIABLE ALTERNATIVES: The existing base course could be removed and replaced with new P-209 or P-208 aggregate base courses.		
13. ASSURANCE THAT MTS WILL PROVIDE AS OUTLINED IN THE "USER GUIDE": Gradation and compaction required in the specification has been shown in the FAA Central region to be reliable for producing CBR values higher than what was specified in this project.  A modulus of 30,000 will be used in the design. This equates to a CBR of 20 and a k value of 242.55 pci.		
<b>ATTACH ADDITIONAL SHEETS AS NECESSARY – INCLUDE SKETCH/PLAN</b>		

# FAA GREAT LAKES REGION MODIFICATION OF AIRPORT DESIGN STANDARDS

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☐

Modifications to materials standards is requested because locally available materials cannot meet the requirements of that standard.

☒

Modifications to construction methods standards will result in cost savings and/or greater efficiency.

☐

Bids have already been received for this project.

IF ANY OF THE ABOVE IS CHECKED PLEASE PROVIDE ADDITIONAL DETAILS.

It is anticipated that the use of a recycled bituminous aggregate base course will save \$350,000 over the alternatives discussed.

15. SIGNATURE OF ORIGINATOR:

*David Reid*

16. PRINTED NAME OF ORIGINATOR

David Reid

17. DATE

2/29/16

18. ORIGINATOR'S ORGANIZATION:

Kalamazoo/Battle Creek International Airport

19. TELEPHONE



(269) 388-3690

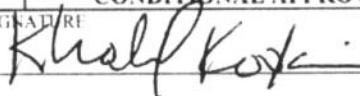
20. E-MAIL

dereid@kalcounty.com

21. DATE OF LATEST FAA SIGNED ALP:

August 28, 2013

BELOW IS TO BE COMPLETED BY FAA				
22 ADORECOMMENDATION <b>CONCUR, WITH CONDITIONS</b>	23 SIGNATURE 	24 DATE <b>6/18/16</b>		
25 FAA DIVISIONAL REVIEW (AT, AL, FS, etc.)				
ROUTING SYMBOL	SIGNATURE	DATE	CONCUR	NON-CONCUR
AGL-620		06/13/2016	WITH CONDITIONS	
COMMENTS: <b>CONDITIONS:</b> 1) ITEM P-207, AS PROPOSED, IS PERMITTED FOR USE ON THE GENERAL AVIATION APRON. ITEM P-207 MUST BE FOLLOWED WHICH INCLUDES NO MORE THAN 50% OF THE MATERIAL CAN BE FROM THE RECYCLED BITUMINOUS PAVEMENT.  2) THE USE OF ITEM P-207 IS DECLINED ON THE COMMERCIAL APRON.				

26 AIRPORTS DIVISION FINAL ACTION			
<input type="checkbox"/> <div style="background-color: black; color: white; text-align: center; padding: 2px;">UNCONDITIONAL APPROVAL</div>	<input checked="" type="checkbox"/> <div style="background-color: black; color: white; text-align: center; padding: 2px;">CONDITIONAL APPROVAL</div>	<input type="checkbox"/> <div style="background-color: black; color: white; text-align: center; padding: 2px;">[REDACTED]</div>	
DATE <b>6/20/16</b>	SIGNATURE 	TITLE <b>Manager AAS-100</b>	
CONDITIONS OF APPROVAL  1) Concur with Regional CONDITIONS indicated in COMMENTS above to approve use on General Aviation Apron but not on Commercial Service Apron.  2) Engineer to verify Detail and FAARFIELD design that 16.47 inches of existing granular sub-base remains; and if not, resubmit FAARFIELD with actual anticipated thicknesses to show compliance with CDF of 1 or less.  3) During a test section and any other locations indicated by the Engineer, the contractor and engineer must provide visual evidence that the remaining material remains undisturbed or in a compacted condition meeting specifications and acceptable to the engineer.  4) Although shown to be reliable in FAA Central Region, product and variation of materials vary by both Region and specific project locations. Therefore to assure material complies with design parameters the Engineer must verify modulus of 30,000 in a test section/at beginning of construction and elsewhere that Engineer deems necessary throughout recycling process phase.			